2003 Indiana State Cancer Registry Statistical Report

October 4, 2004

Indiana State Cancer Registry
Indiana State Department of Health
2 North Meridian Street
Indianapolis, Indiana 46204

Introduction

One year ago, the Indiana State Department of Health (ISDH), the American Cancer Society (ACS) and the Indiana Cancer Consortium (ICC) released the *Indiana Cancer Facts and Figures 2003, A sourcebook for planning and implementing programs for cancer prevention and control.* This document was the first of its kind from the ICC, comprised of more than 62 organizations, and it was an important first step in the development of a comprehensive cancer control plan for Indiana. The ISDH, ACS and ICC continue to work toward the delivery of a comprehensive statewide cancer plan that will improve the health of Hoosiers.

This report is a statistical update from the ISDH's Indiana State Cancer Registry. Pursuant to IC 16-38-2-11 the ISDH must publish information from the Indiana State Cancer Registry collected in the previous calendar year. Viewed together, the *Indiana Cancer Facts and Figures 2003* and this report contain narrative information and the latest data on cancer in Indiana**.** The data contained in this report represent information on cancers diagnosed in 2002 in Indiana residents and reported to the Indiana State Cancer Registry as of September 27, 2004. The data are considered to be approximately 91% complete as of this date.

The completeness of the registry data will increase after the Indiana State Cancer Registry completes the process of identifying and resolving 2,366 unreported cancer cases identified through a review of death certificates. The process of following back on every potentially missed, unreported case was delayed due to unavailability of 2002 death records until December 9, 2003 and insufficient staff to conduct the review. This review will be completed by December 3, 2004, when the data will be submitted to a national organization for evaluation of the completeness, quality, and timeliness of the data.

Incidence Rates

The incidence rate for a disease is the number of newly diagnosed cases for every 100,000 people. Thus if a state has a population of one million people, and 4,000 cases of cancer are diagnosed among them in a particular year, the cancer incidence rate for that year is 400. Because cancer is much more common in older people, it would be misleading to compare the cancer incidence rates of two states, such as Florida and Alaska, where the proportion of older people is much greater in one than the other. To make such comparisons meaningful, the rates are age-adjusted, which means the rates are weighted according to the age distribution of the population compared with a standard population. The rates in this report are age-adjusted to the 2000 US standard.

Because of random variations, the true rate may not be the same as the calculated rate. However, it is possible to calculate a range of values such that there is a given probability that the true rate lies within that range. This range of values is called a confidence interval, and the two endpoints of the range are called the Lower Confidence Interval endpoint (LCI) and the Upper Confidence Interval endpoint (UCI). Tables 1 through 3 show the ten most commonly diagnosed cancers in Indiana in 2002, giving the number of cases diagnosed, the age-adjusted incidence rate, and the 95% confidence interval for the rate. In other words, the value in the Rate column may not be the true rate, but there is a 95% chance that the true rate lays between the values in the LCI and UCI columns.

Table 1
The Ten Most Common Cancers for Both Sexes Combined

Site	Count	Rate	LCI	UCI
Lung and Bronchus	4,391	72.0	69.9	74.1
Colon excluding Rectum	2,440	39.8	38.3	41.4
Urinary Bladder	1,125	18.3	17.3	19.4
Non-Hodgkin Lymphoma	1,050	17.2	16.1	18.2
Rectum and Rectosigmoid Junction	883	14.4	13.4	15.4
Kidney and Renal Pelvis	845	13.8	12.9	14.7
Melanoma of the Skin	835	13.6	12.7	14.6
Leukemia	634	10.4	9.6	11.2
Oral Cavity and Pharynx	605	9.8	9.1	10.6
Pancreas	574	9.4	8.6	10.2

Figure 1
The Ten Most Common Cancers for Both Sexes Combined

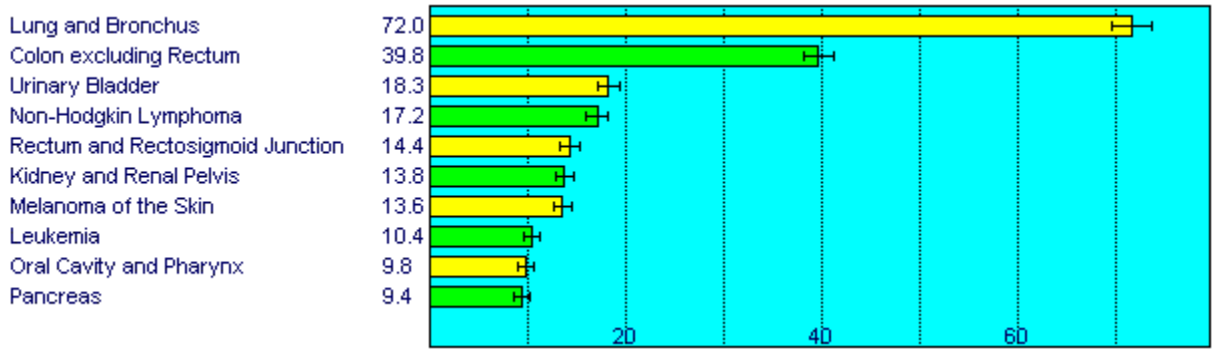


Table 2
The Ten Most Common Cancers for Males

Site	Count	Rate	LCI	UCI
Prostate	3,265	122.2	118.0	126.5
Lung and Bronchus	2,469	93.9	90.2	97.7
Colon excluding Rectum	1,155	44.8	42.2	47.5
Urinary Bladder	833	32.4	30.2	34.7
Non-Hodgkin Lymphoma	596	21.9	20.2	23.8
Rectum and Rectosigmoid Junction	497	18.4	16.8	20.1
Kidney and Renal Pelvis	488	17.6	16.0	19.2
Melanoma of the Skin	470	17.1	15.5	18.7
Oral Cavity and Pharynx	422	15.0	13.6	16.6
Leukemia	365	13.8	12.4	15.3

Figure 2

The Ten Most Common Cancers for Males

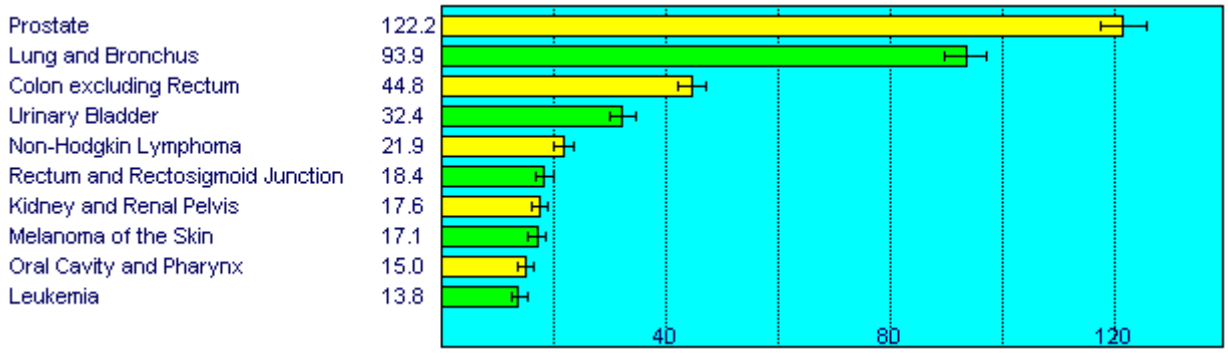


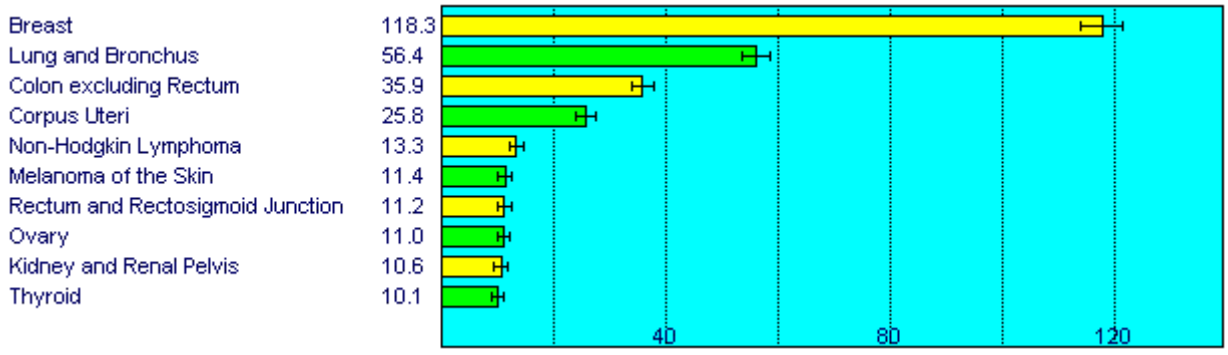
Table 3

The Ten Most Common Cancers for Females

Site	Count	Rate	LCI	UCI
Breast	3,960	118.3	114.6	122.1
Lung and Bronchus	1,921	56.4	53.8	58.9
Colon excluding Rectum	1,285	35.9	34.0	38.0
Corpus Uteri	866	25.8	24.1	27.6
Non-Hodgkin Lymphoma	454	13.3	12.1	14.6
Melanoma of the Skin	365	11.4	10.2	12.6
Rectum and Rectosigmoid Junction	386	11.2	10.1	12.4
Ovary	370	11.0	9.9	12.2
Kidney and Renal Pelvis	357	10.6	9.5	11.8
Thyroid	317	10.1	9.0	11.3

Figure 3

The Ten Most Common Cancers for Females



Stage

The stage at diagnosis describes the extent or spread of cancer at the time the patient is diagnosed. The staging shown in this report is called summary staging, and it is divided into the following categories:

In Situ: The tumor is not invasive and is confined to the layer of cells in which it began.

Local: The tumor has not spread beyond the primary organ.

Regional: The tumor has spread to surrounding organs, tissues, or lymph nodes.

Distant: The tumor has spread to other parts of the body through the blood or lymph node systems.

Unknown: There is not enough information to determine the stage.

Table 4
Stage at Diagnosis for All Sites, Races, and Sexes

Stage	Count	Percent
In Situ:	3,019	10.4%
Local:	11,580	39.8%
Regional:	6,123	21.1%
Distant:	6,357	21.9%
Unknown:	1,996	6.9%

Figure 4
Stage at Diagnosis for All Sites, Races, and Sexes

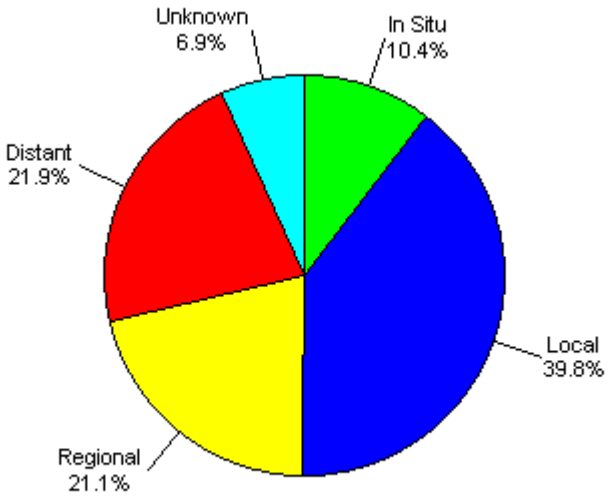


Table 5
Stage at Diagnosis by Race and Sex for All Sites

	Total	In Situ	Local	Regional	Distant	Unknown
White Male	12,529	802	5,180	2,567	3,033	947
Percent	100.0%	6.4%	41.3%	20.5%	24.2%	7.6%
White Female	14,100	1,991	5,585	3,038	2,716	770
Percent	100.0%	14.1%	39.6%	21.5%	19.3%	5.5%
African-American Male	958	29	360	218	290	61
Percent	100.0%	3.0%	37.6%	22.8%	30.3%	6.4%
African-American Female	1,028	122	345	250	247	64
Percent	100.0%	11.9%	33.6%	24.3%	24.0%	6.2%
All Races and Sexes	29,075	3,019	11,580	6,123	6,357	1,996
Percent	100.0%	10.4%	39.8%	21.1%	21.9%	6.9%

Figure 5

Stage at Diagnosis by Race and Sex for All Sites

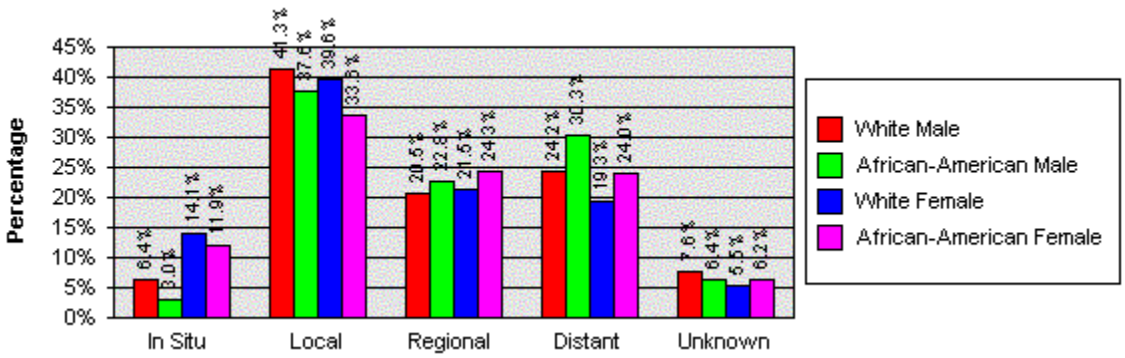


Table 6

Stage at Diagnosis by Race for Female Breast

	Total	In Situ	Local	Regional	Distant	Unknown
White Female	4,453	812	2,336	1,053	162	90
Percent	100.0%	18.2%	52.5%	23.6%	3.6%	2.0%
African-American Female	340	63	147	104	20	6
Percent	100.0%	18.5%	43.2%	30.6%	5.9%	1.8%
All Races	4,876	891	2,514	1,181	185	105
Percent	100.0%	18.3%	51.6%	24.2%	3.8%	2.2%

Figure 6

Stage at Diagnosis by Race for Female Breast

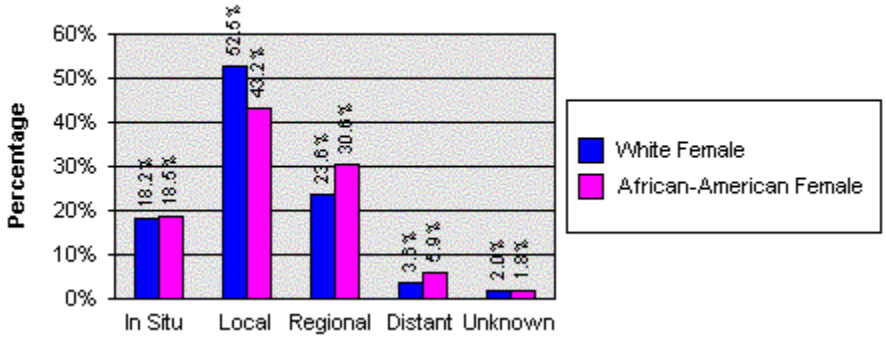


Table 7

Stage at Diagnosis by Race for Prostate

	Total	In Situ	Local	Regional	Distant	Unknown
White Male	2,975	52	2,291	339	118	175
Percent	100.0%	1.7%	77.0%	11.4%	4.0%	5.9%
African-American Male	260	2	189	41	20	8
Percent	100.0%	0.8%	72.7%	15.8%	7.7%	3.1%
All Races	3,322	57	2,504	383	139	239
Percent	100.0%	1.7%	75.4%	11.5%	4.2%	7.2%

Figure 7

Stage at Diagnosis by Race for Prostate

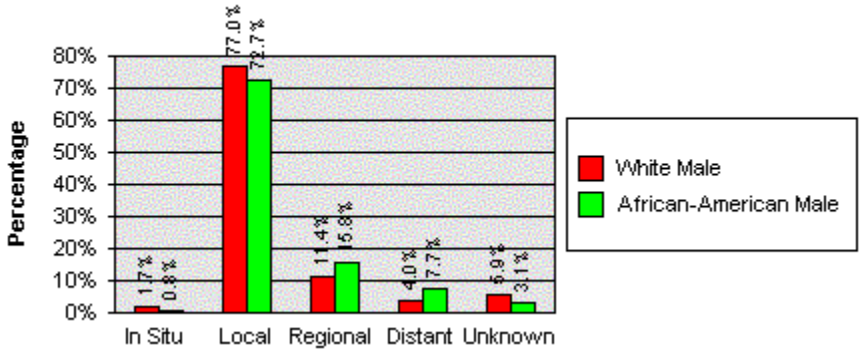


Table 8

Stage at Diagnosis by Race and Sex for Lung

	Total	In Situ	Local	Regional	Distant	Unknown
White Male	2,263	4	366	581	1,175	137
Percent	100.0%	0.2%	16.2%	25.7%	51.9%	6.1%
White Female	1,764	0	367	416	876	105
Percent	100.0%	0.0%	20.8%	23.6%	49.7%	6.0%
African-American Male	190	0	33	48	101	8
Percent	100.0%	0.0%	17.4%	25.3%	53.2%	4.2%
African-American Female	142	0	18	36	85	3
Percent	100.0%	0.0%	12.7%	25.4%	59.9%	2.1%
All Races and Sexes	4,396	5	790	1,090	2,255	256
Percent	100.0%	0.1%	18.0%	24.8%	51.3%	5.8%

Figure 8

Stage at Diagnosis by Race and Sex for Lung

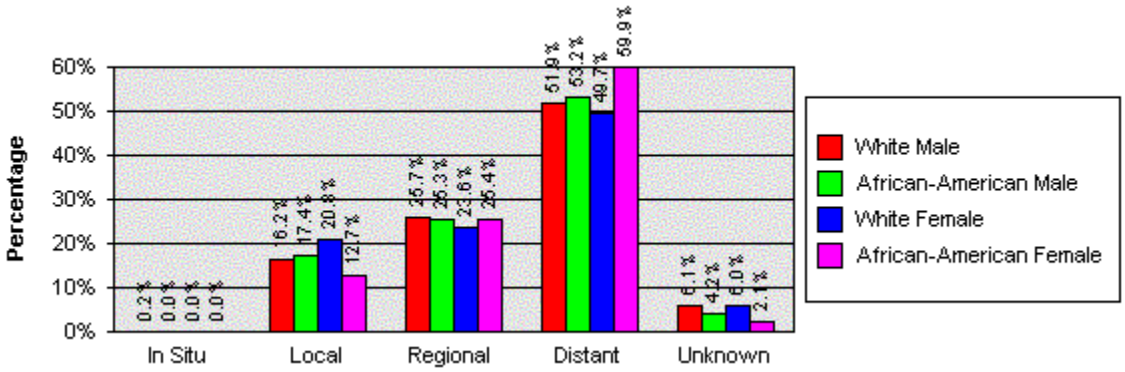
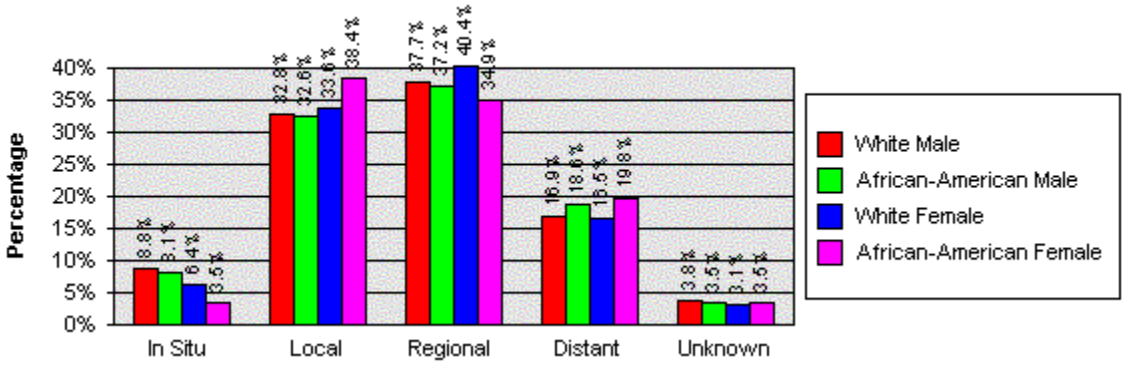


Table 9
Stage at Diagnosis by Race and Sex for Colon

	Total	In Situ	Local	Regional	Distant	Unknown
White Male	1,166	103	383	439	197	44
Percent	100.0%	8.8%	32.8%	37.7%	16.9%	3.8%
White Female	1,271	81	427	513	210	40
Percent	100.0%	6.4%	33.6%	40.4%	16.5%	3.1%
African-American Male	86	7	28	32	16	3
Percent	100.0%	8.1%	32.6%	37.2%	18.6%	3.5%
African-American Female	86	3	33	30	17	3
Percent	100.0%	3.5%	38.4%	34.9%	19.8%	3.5%
All Races and Sexes	2,636	196	877	1,019	445	99
Percent	100.0%	7.4%	33.3%	38.7%	16.9%	3.8%

Figure 9
Stage at Diagnosis by Race and Sex for Colon



Counts and Rates for Selected Cancers

Table 10
Counts and Rates for Selected Cancers by Sex and Race

Both Sexes	All Races		White		African-American	
Site	Count	Rate	Count	Rate	Count	Rate
All Sites	26,548	433.1	24,310	429.7	1,850	473.9
Lung	4,391	72.0	4,023	71.2	333	88.3
Colon	2,440	39.8	2,253	39.6	162	43.8

Male	All Races		White		African-American	
Site	Count	Rate	Count	Rate	Count	Rate
All Sites	13,255	496.4	12,087	488.7	940	573.6
Prostate	3,265	122.2	2,923	117.6	258	162.4
Lung	2,469	93.9	2,259	92.5	190	119.4
Colon	1,155	44.8	1,063	44.4	79	52.4

Female	All Races		White		African-American	
Site	Count	Rate	Count	Rate	Count	Rate
All Sites	13,289	391.8	12,221	392.2	909	404.4
Breast	3,960	118.3	3,641	118.5	277	121.2
Lung	1,921	56.4	1,764	56.0	142	65.6
Colon	1,285	35.9	1,190	35.9	83	38.1

Table 11
Counts and Rates for Selected Cancers by County

County	All Sites		Female Breast		Prostate		Lung		Colon	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Indiana	26,548	433.1	3,960	118.3	3,265	122.2	4,391	72.0	2,440	39.8
Adams	105	316.3	19	#	5	#	20	62.2	12	#
Allen	1,272	402.6	231	131.8	120	86.7	186	60.0	119	38.0
Bartholomew	319	432.9	47	115.8	33	99.3	56	75.4	21	29.3
Benton	58	563.4	*	#	7	#	13	#	*	#
Blackford	96	584.8	14	#	13	#	18	#	12	#
Boone	158	335.0	23	86.0	19	#	19	#	14	#
Brown	38	238.8	*	#	8	#	6	#	*	#
Carroll	84	380.3	11	#	11	#	12	#	10	#
Cass	196	433.4	27	113.3	27	133.1	24	51.8	23	48.8
Clark	345	343.4	57	100.8	52	124.7	62	61.8	30	31.5
Clay	176	594.0	28	170.3	26	196.4	25	81.0	18	#
Clinton	166	456.6	20	101.0	19	#	24	65.6	14	#
Crawford	34	288.4	*	#	*	#	6	#	5	#
Daviess	145	446.2	9	#	17	#	23	71.0	19	#
Dearborn	142	321.3	11	#	17	#	39	89.7	18	#
Decatur	107	417.1	10	#	6	#	19	#	*	#
DeKalb	150	391.2	34	168.0	7	#	14	#	13	#
Delaware	566	458.3	69	100.3	76	148.0	97	78.0	59	46.9
Dubois	156	379.8	26	116.8	25	133.6	17	#	19	#
Elkhart	717	423.7	100	108.0	82	114.6	115	69.6	64	38.3
Fayette	149	503.4	25	156.8	14	#	23	75.8	16	#
Floyd	283	386.6	39	96.2	50	163.9	60	83.1	18	#
Fountain	100	470.6	14	#	17	#	18	#	11	#
Franklin	59	256.3	12	#	*	#	15	#	*	#
Fulton	101	414.6	16	#	16	#	16	#	7	#
Gibson	152	404.0	23	105.3	11	#	25	67.3	24	62.3
Grant	412	490.4	52	120.6	56	147.5	71	82.3	27	31.1
Greene	170	440.1	18	#	23	129.0	38	96.5	16	#
Hamilton	609	400.2	114	126.9	66	100.6	81	59.8	45	31.9
Hancock	264	455.6	37	115.7	25	94.6	52	91.2	26	46.9
Harrison	96	277.8	10	#	21	133.1	15	#	7	#
Hendricks	460	461.4	73	133.8	48	106.0	73	76.1	33	34.2
Henry	249	438.4	33	109.5	36	138.4	41	70.5	24	41.1
Howard	382	410.5	45	86.2	50	124.8	70	74.4	33	35.1
Huntington	141	338.0	25	110.3	7	#	22	55.6	15	#
Jackson	228	524.4	36	146.2	25	142.9	40	91.5	17	#
Jasper	147	475.2	21	126.1	23	166.6	25	80.9	11	#
Jay	105	428.7	16	#	9	#	15	#	13	#
Jefferson	122	359.2	28	150.0	7	#	22	64.9	19	#
Jennings	113	431.5	16	#	12	#	18	#	8	#
Johnson	507	443.6	77	122.0	66	129.5	73	65.0	36	32.2
Knox	221	509.7	23	97.0	24	129.6	31	70.0	29	65.8
Kosciusko	303	404.9	50	125.9	30	88.0	51	67.9	28	37.3
LaGrange	108	362.2	27	177.3	8	#	13	#	10	#
Lake	2,238	443.5	325	117.6	332	150.7	314	62.3	215	42.6
LaPorte	531	447.7	87	137.6	77	146.2	85	71.1	49	40.8
Lawrence	219	412.8	27	92.9	34	141.3	38	69.9	18	#
Madison	722	474.9	98	118.4	78	113.9	150	96.6	74	46.9
Marion	3,699	473.8	580	131.3	430	134.0	678	88.9	285	36.9
Marshall	228	484.4	38	151.4	27	133.9	30	65.1	25	51.2
Martin	73	629.6	11	#	9	#	7	#	8	#
Miami	177	469.4	24	118.5	21	114.5	26	69.5	11	#
Monroe	438	456.5	71	137.0	70	165.8	66	70.7	36	37.6
Montgomery	175	425.1	22	103.6	25	139.2	31	72.9	22	52.6
Morgan	303	477.8	46	129.8	49	171.5	46	73.0	23	38.7
Newton	70	458.6	8	#	*	#	11	#	9	#
Noble	159	369.0	28	123.7	18	#	32	75.1	20	46.4
Ohio	19	#	*	#	*	#	7	#	*	#
Orange	87	391.8	10	#	16	#	14	#	6	#
Owen	91	384.6	15	#	11	#	19	#	7	#
Parke	75	378.3	9	#	10	#	14	#	10	#
Perry	43	204.4	8	#	*	#	7	#	*	#
Pike	65	437.2	9	#	6	#	17	#	*	#

County	All Sites		Female Breast		Prostate		Lung		Colon	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Porter	670	459.2	83	102.7	101	152.4	98	69.8	57	40.9
Posey	91	325.9	9	#	11	#	17	#	10	#
Pulaski	73	468.8	13	#	16	#	8	#	*	#
Putnam	160	439.1	18	#	21	122.5	43	118.4	13	#
Randolph	138	425.2	21	125.8	18	#8	23	69.9	10	#
Ripley	112	392.9	11	#	14	#	20	70.1	14	#
Rush	69	352.7	7	#	*	#	25	126.4	6	#
St. Joseph	1,301	476.3	188	130.8	152	128.8	186	68.3	149	51.8
Scott	100	467.3	15	#	18	#	18	#	12	#
Shelby	174	399.5	23	96.5	20	96.6	31	71.5	15	#
Spencer	74	337.7	11	#	9	#	10	#	*	#
Starke	123	477.3	21	154.5	12	#	22	82.1	12	#
Steuben	141	429.8	21	121.8	12	#	20	59.8	17	#
Sullivan	112	474.7	18	#	16	#	23	96.1	16	#
Switzerland	30	317.2	5	#	*	#	9	#	*	#
Tippecanoe	504	436.1	72	115.3	74	148.7	73	65.4	40	34.2
Tipton	91	468.6	14	#	10	#	12	#	8	#
Union	16	#	*	#	5	#	*	#	*	#
Vanderburgh	742	388.7	119	111.8	86	105.1	138	71.1	68	34.7
Vermillion	95	483.6	16	#	18	#	11	#	7	#
Vigo	522	466.6	70	110.2	68	146.4	86	77.1	59	50.6
Wabash	155	381.9	26	117.4	18	#	23	54.1	21	49.2
Warren	37	393.5	10	#	*	#	*	#	*	#
Warrick	220	417.7	42	142.3	20	85.9	36	69.6	27	52.2
Washington	109	395.0	6	#	21	173.9	23	82.4	12	#
Wayne	349	426.7	45	100.2	36	94.4	76	91.0	38	45.3
Wells	118	397.1	16	#	14	#	12	#	15	#
White	137	480.4	25	159.6	16	#	23	79.2	16	#
Whitley	119	362.8	30	172.3	6	#	17	#	9	#

* Count suppressed if fewer than 5 cases.
# Rate suppressed if fewer than 20 cases.